



Application No. 09/767,154
Applicants: Naoyuki TAKAHASHI *et al.*

CLAIM AMENDMENTS

Claim 1. (Canceled).

Claim 2. (Canceled).

Claims 3-9. (Canceled).

Claim 10. (Currently Amended) ~~The article of Claim 9~~ A quartz thin film made by depositing at least one silicon alkoxide selected from the group consisting of tetramethoxysilane, tetraethoxysilane, tetrapropoxysilane and tetrabutoxysilane on a substrate under atmospheric pressure,

wherein a buffer layer is disposed between the quartz thin film and the substrate; and

wherein the quartz thin film is a quartz epitaxial thin film; and

wherein the buffer layer comprises a hexagonal system crystal phase material, wherein the buffer layer is GaN or ZnO.

Claims 11-12. (Canceled).

Claim 13. (Currently Amended) An article of manufacture selected from the group consisting of vibrators, oscillator, high frequency filter surface acoustic wave element, optical waveguide, semiconductor substrate wherein the manufactured article comprises the article of Claim 10.

Claims 14 and 15. (Canceled).

Claim 16. (Currently Amended) ~~The article of Claim 14~~ An article comprising a quartz thin film grown on a substrate under atmospheric pressure,

wherein the quartz thin film comprises a deposit formed from at least one silicon alkoxide selected from the group consisting of tetramethoxysilane, tetraethoxysilane, tetrapropoxysilane and tetrabutoxysilane;

wherein the substrate comprises a material selected from the group consisting of sapphire, silicon, and GaAs; and

a buffer layer

wherein the buffer layer is disposed between said substrate and said quartz thin film and

wherein said buffer layer comprises a hexagonal system crystal phase, wherein the buffer layer is GaN or ZnO.

Claims 17-19. (Canceled).

Claim 20. (Currently Amended) An article of manufacture selected from the group consisting of vibrators, oscillator, high frequency filter surface acoustic wave element, optical waveguide, semiconductor substrate wherein the manufactured article comprises the article of Claim 14 ~~14~~ 16.

Claim 21. (Previously Presented) A quartz thin film made by contacting a composite under atmospheric pressure with at least one silicon alkoxide selected from the group consisting of tetramethoxysilane, tetraethoxysilane, tetrapropoxysilane and tetrabutoxysilane, wherein the composite comprises a substrate and a buffer layer,

in which the quartz film is a quartz epitaxial thin film; and

in which the buffer layer is disposed between said substrate and said quartz thin film, and wherein the buffer layer is GaN or ZnO.

Claim 22 (Previously Presented). An article comprising a quartz thin film grown on a substrate under atmospheric pressure,

wherein the quartz thin film comprises a deposit formed from at least one silicon alkoxide selected from the group consisting of tetramethoxysilane, tetraethoxysilane, tetrapropoxysilane and tetrabutoxysilane; and

wherein the substrate comprises a material selected from the group consisting of sapphire, silicon, and GaAs; and which further comprises a third layer which is a buffer layer which is disposed between said substrate and said quartz thin film, wherein the buffer layer is GaN or ZnO.

Claims 23-28 (Canceled).